



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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File

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Governor

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August 4, 1999

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Mr. John Wirthwein
Executive Furniture
P.O. Box 167
Huntingburg, Indiana 47542

Re: 037-11040-00054
Minor Source Modification to:
Part 70 permit No.: T037-5915-00054

Dear Mr. Wirthwein:

Executive Furniture was issued Part 70 operating permit T037-5915-00054 on December 17, 1998, for a wood furniture manufacturing plant. An application to modify the source was received on June 7, 1999. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

- (1) Replace varnish booth F with a downdraft spray booth.
- (2) Replace emission units O2 and Q with one (1) downdraft spray booth.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Management (OAM).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.
6. Pursuant to 326 IAC 2-7-10.5(i) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

The proposed operating conditions applicable to these emission units are attached to this Source Modification approval. These proposed operating conditions shall be incorporated into the Part 70 operating permit as a minor permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter call (800) 451-6027, press 0 and ask for Karen Purtell or extension 3-2803, or dial (317) 233-2803.

Sincerely,



Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

Attachments

klp

cc: File - Dubois County
U.S. EPA, Region V
Dubois County Health Department
Air Compliance Section Inspector - Ray Schick
Compliance Data Section - Mindy Jones
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for a Minor Source Modification to a Part 70 Operating Permit

Source Background and Description

Source Name:	Executive Furniture, Incorporated
Source Location:	4611 S. 400 West, Huntingburg, Indiana 47542
County:	Dubois
SIC Code:	2521
Operation Permit No.:	T037-5915-00054
Operation Permit Issuance Date:	December 17, 1998
Source Modification No.:	037-11040-00054
Permit Reviewer:	Karen Purtell

The Office of Air Management (OAM) has reviewed a modification application from Executive Furniture, Incorporated relating to the replacement of three surface coating booths with two (2) downdraft booths at their wood manufacturing plant.

History

On June 7, 1999, Executive Furniture, Inc., submitted an application to the OAM requesting to replace emission units F, 02 and Q with two (2) downdraft booths. Executive Furniture, Inc., was issued a Part 70 Permit on December 17, 1998.

Existing Approvals

The source was issued a Part 70 Operating Permit on December 17, 1998. Previously, the source was operating under the following approvals including, but not limited to:

- (a) A 037-4734, issued on September 28, 1995.
- (b) CP 037-3133, issued on August 3, 1994.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Minor Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on June 7, 1999.

This modification was considered a minor source modification because pursuant to 326 IAC 2-7-12(b)(1) the modification will not involve significant changes to existing monitoring, reporting, or record keeping requirements and will not result in an increase in emissions from the source.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

Pollutant	Source Potential To Emit (tons/year) with existing equipment	Source Potential to Emit (tons/year) after new equipment
PM	less than 100	less than 100
PM-10	less than 100	less then 100
SO ₂	less than 100	less than 100
VOC	greater than 100, less than 250	greater than 100, less than 250
CO	less than 100	less than 100
NO _x	less than 100	less than 100

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP's	Source Potential to Emit (tons/year) with existing equipment	Source Potential To Emit (tons/year) after new equipment
Methanol	less than 10	less than 10
MEK	greater than 10	greater than 10
Xylene	greater than 10	greater than 10
Hexone	greater than 10	greater than 10
Toluene	less than 10	less than 10
TOTAL	greater than 25	greater than 25

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of VOC are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination HAPs is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 1995 OAM emission data.

Pollutant	Actual Emissions (tons/year)
PM	0.5
PM-10	0.5
SO ₂	0.0
VOC	133.0
CO	0.0
NO _x	0.0
Methanol	5.0
MEK	20.6
Hexone	18.6
Toluene	8.0
Xylene	12.4

Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

	Limited Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
(2) woodworking operations	20.14 each	----	----	----	----	----	----
Surface coating operations	-----	----	-----	247.8	----	----	----
Total Emissions	40.28	----	----	247.8	----	----	----

County Attainment Status

The source is located in Dubois County.

Pollutant	Status
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Dubois County has been designated as attainment

or unclassifiable for ozone.

Federal Rule Applicability - (two new downdraft booths, units F and Q)

40 CFR 63, Subpart JJ

- (a) The wood furniture coating operation is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP), 326 IAC 20-14 (40 CFR 63, Subpart JJ).
- (b) Pursuant to 40 CFR 63, Subpart JJ, the wood furniture coating operations shall comply with the following conditions:
 - (1) Limit the volatile hazardous air pollutant (VHAP) emissions from finishing operations as follows:
 - (A) Achieve a weighted average VHAP content across all coatings of 1.0 pound VHAP per pound solids, as applied; or
 - (B) Use compliant finishing materials in which all stains, washcoats, sealers, topcoats, basecoats and enamels have a maximum VHAP content of 1.0 pound VHAP per pound solid, as applied. Thinners used for on-site formulation of washcoats, basecoats, and enamels have a 3.0 percent maximum VHAP content by weight. All other thinners have a 10.0 percent maximum VHAP content by weight; or
 - (C) Use a control device to limit emissions; or
 - (D) Use any combination of (A), (B), and (C).
 - (2) Limit the VHAP emissions from contact adhesives as follows:
 - (A) Use Compliant contact adhesives as follows:
 - (i) For foam adhesives used in products that meet the upholstered seating flammability requirements, the VHAP content shall not exceed 1.8 pounds VHAP per pound solids.
 - (ii) For all other contact adhesives (except aerosols and contact adhesives applied to nonporous substrates) the VHAP content shall not exceed 1.0 pound VHAP per pound solids.
 - or
 - (B) Use a control device to limit emissions.
 - (3) The strippable spray booth material shall have a maximum VOC content of 0.8 pounds VOC per pound solids.
 - (4) The source shall complete a work practice implementation plan within sixty (60) calendar days after the source's compliance date as specified in 40 CFR 63.803. The plan must detail how the source will incorporate environmentally desirable practices into the operation.
 - (5) A semi-annual summary report shall be prepared and submitted to IDEM, OAM, and the U.S. EPA Region V, to document the ongoing compliance status of the wood furniture coating operations.

State Rule Applicability - Entire Source

326 IAC 1-6-3 (Preventive Maintenance Plan)

The source has submitted a Preventive Maintenance Plan (PMP) for the surface coating operations and woodworking operations on May 22, 1996. This PMP has been verified to fulfill the requirements of 326 IAC 1-6-3 (Preventive Maintenance Plan).

326 IAC 1-5-2 (Emergency Reduction Plans)

The source has submitted an Emergency Reduction Plan (ERP) on May 22, 1996. The ERP has been verified to fulfill the requirements of 326 IAC 1-5-2 (Emergency Reduction Plans).

326 IAC 2-2 (Prevention of Significant Deterioration)

Pursuant to CP 037-3133-00054, issued on August 3, 1994, the surface coating operations shall be limited to 247.8 tons of VOC, including coatings, dilution solvents, cleaning solvents and solvents used in top rubbing, per twelve consecutive month period. This limit is required to limit the potential to emit of VOC to less than 250 tons per twelve consecutive period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than one hundred (100) tons per year of VOC. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by July 1 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Opacity)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

The source is located in Dubois county but not in Bainbridge township. Therefore, the source is limited to 40% opacity in twenty-four (24) consecutive readings.

State Rule Applicability - (two new downdraft booths, units F and Q)

326 IAC 6-3-2 (Process Operations)

Pursuant to 326 IAC 6-3-2, the allowable particulate matter (PM) emission rate from each of the surface coating booths shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The dry filters shall be in operation at all times the surface coating booths are in operation in

order to comply with this limit.

326 IAC 8-2-12 (Wood Furniture and Cabinet Coating)

Pursuant to 326 IAC 8-2-12, the surface coating applied to wood furniture and cabinets shall utilize one of the following application methods:

- Airless Spray Application
- Air Assisted Airless Spray Application
- Electrostatic Spray Application
- Electrostatic Bell or Disc Application
- Heated Airless Spray Application
- Roller Coating
- Brush or Wipe Application
- Dip and Drain Application

High Volume Low Pressure (HVLP) Spray Application is an accepted alternative method of application for Air Assisted Airless Spray Application. HVLP spray is the technology used to apply coating to substrate by means of coating application equipment which operates between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

The two new downdraft booths, emission units F and Q have applicable compliance monitoring conditions as specified below:

- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the surface coating booths exhausts while one or more of the booths are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response steps. Failure to take response steps in accordance with Section C - compliance Monitoring Plan- Failure to Take Response Steps, shall be considered a violation of this permit.
- (b) Monthly inspections shall be performed of the coating emissions from the stack and the

presence of overspray on the rooftops and the nearby ground. During periods of inclement weather, these inspections shall be performed as weather permits. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C- Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

- (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

These monitoring conditions are necessary because the dry filters for the spray booths must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations).

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Part 70 Application Form GSD-08.

This source will emit levels of air toxics greater than those that constitute major source applicability according to Section 112 of the 1990 Clean Air Act Amendments.

Conclusion

The operation of the two downdraft booths, emission units F and Q shall be subject to the conditions of the attached proposed Minor Source Modification 037-11040-00054.